

REMARKS

Claims 1-4, 6-9 and 11-13 are pending in the above-identified application. Claims 3 and 8 have been inserted into claims 1 and 6, respectively. Claims 11 and 12 have been amended so as to address formalities raised in the Office Action. New claim 13 corresponds to claim 11 and has been introduced since it is unclear from the Office Action whether claim 11 is being reviewed as having the same scope as independent claim 13.

Request for Personal Interview with Examiner

Applicant's representative requests a personal Interview with the Patent Examiner in connection with this application. The Interview would discuss the present Reply and especially address the issues raised in connection with the rejection under 35 U.S.C. 112, as well as the significance of the unexpected, advantageous comparative test results with respect to the cited references.

Claimed Objections

Claims 11 and 12 have been objected to as the Patent Examiner requests that the phrase "an isocyanate" and "a polyamine" be changed to --the isocyanate-- and --the polyamine--, respectively in claims 11 and 12. Claims 11 and 12 have been amended as

requested by the Patent Examiner such that these objections should now be withdrawn.

Issues Under 35 U.S.C. § 112

Claims 11 and 12 have been rejected under 35 U.S.C. 112, first paragraph, as the Patent Examiner objects to the phrase "consists essentially of" in these claims. It is argued in the Office Action that the specification does not provide an adequate description for this phrase.

It is submitted that claims 11 and 12 are completely appropriate under applicable Rules within the USPTO and applicable policies under the MPEP. The phrase "consisting essentially of" is a "transitional phrase" and is one of the options that applicants may choose among other transitional phrases as noted in MPEP 2111.03 (Rev. 2, May 2004, pages 2100-52 to 2100-53). There is no prohibition against the selection by applicants of one of the various transitional phrases in the Rules of the USPTO or stated in the MPEP. The Examiner is requested to identify any such Rule or MPEP policy if one exists. Otherwise, it is submitted that the above-noted rejection should be withdrawn.

Issues Under 35 U.S.C. § 103

Claims 1-4, 6-9, 11 and 12 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Wu '358 (USP 5,908,358) in view of Wu '294 (USP 6,210,294). It is noted that claims 3 and 8 have been cancelled. This rejection is traversed for the following reasons.

Present Invention and Its Advantages

The present invention is directed to a golf ball with a cover formed from a cured product of a thermosetting resin composition wherein the stiffness modulus (MPa) and Shore D hardness properties satisfy the relationships recited in claim 1. Significantly, the inventors of the present application have discovered a relationship between the stiffness modulus and hardness properties of the golf ball cover. Evidence of the advantageous properties exhibited by golf balls of the present invention is evidenced by the comparative tests results shown in Tables 2-4 at pages 22-26 of the present specification. In this regard, note that Examples 1-7 (present invention) in Table 2 all provide for excellent ("E") or at least good ("G") controllability and shot feeling properties. In contrast, the various Comparative Examples 8-18 exhibit predominantly poor controllability and shot feeling properties. Note especially Comparative Examples 11 (308 MPa stiffness; 59

Shore D hardness; and A/B ratio of 5.2) and 15 (90 MPa stiffness; 52 Shore D hardness; and A/B ratio of 1.7) which both exhibit only poor ("P") or fair ("F") controllability and shot feeling properties. Comparative Examples 11 and 15 have acceptable golf ball cover stiffness and hardness properties according to Wu '358 discussed below.

Distinctions between Present Invention and Wu '358

Wu '358 discloses a golf ball having a urethane cover which is formed using an epoxy curing agent. The cover may be formed from a thermosetting or thermoplastic polyurethane composition and the Young's modulus of the cover is in the range of 5,000-100,000 psi (converting to 34.5-689.5 MPa). This is described at column 2, lines 35-45 and column 5, lines 8-22. Wu '358 further discloses at the bottom of column 6 to the top of column 7 that the golf ball cover is formed to have a Shore D hardness at the end of the intermediate curing step of 10-30. Wu '358 discloses at Table 1 examples of the invention wherein the cover has a Shore D hardness of 51 and 58. Wu '358 clearly states that using an organic curing agent having at least one epoxy group materially affects the properties of the golf ball cover composition described therein based on the conclusions drawn with respect to the comparative test results at column 9, lines 14-22. Here, Wu '358 points out that

golf balls which employ compositions without an epoxy curing agent exhibit disadvantageous, inferior properties when compared to the inventive examples which employ an epoxy curing agent.

Wu '358 Fails to Disclose/Suggest

Isocyanate Component

Wu '358 fails to disclose the use of the specific thermosetting composition employed in the present invention as recited in the present claims. The disclosure by Wu '358 at column 5, lines 39-50 does not include any of the specific examples of the isocyanate components employed in the urethane prepolymer of the thermosetting composition of the golf ball cover of the present invention. Wu '358 fails to provide any reasonably adequate suggestion to employ these isocyanate components. In addition, claims 11 and 12 employ the "consisting essentially of" claim language which excludes additional components that materially affect the properties of the claimed composition, such that these claims clearly exclude the epoxy curing agent required by Wu '358 which, as noted above, Wu '358 clearly establishes materially affect the golf ball cover composition properties. Consequently, significant patentable distinctions exist between the present invention and Wu '358.

Wu '358 Fails to Disclose/Suggest

Stiffness/Hardness Relationship

Wu '358 also fails to disclose the specific relationship between the stiffness and hardness properties of the golf ball cover as in the present invention, such that the ranges for "A" and "B" are satisfied as recited in claim 1 of the present application. In fact, as noted above, Comparative Examples 11 and 15 in Table 3 at page 24 of the present specification employ acceptable stiffness and hardness properties based on the ranges and examples described in Wu '358. Consequently, it is clear that Wu '358 fails to provide any reasonable suggestion towards obtaining the present invention such that a person skilled in the art would have to engage in experimentation without sufficient guidance. Wu '358 fails to recognize the advantages associated with the golf ball of the present invention with regard to advantageously improved controllability and shot feeling properties. Therefore, additional significant patentable distinctions exist between the present invention and Wu '358.

If Wu '358 fails to disclose or suggest: [i] the specific isocyanate component, [ii] the relationship between stiffness and hardness properties "A/B", and [iii] the selected stiffness modulus range of 80-260 MPa, then how does one skilled in the art arrive at the present invention without a great deal of experimentation and

no direction for the experiments? Note that the fact that the claimed invention is within the capabilities of one of ordinary skill in the art fails to be sufficient in establishing prima facie obviousness. *In re Kotzab*, 55 USPQ2d 1313, 1318 (Fed. Cir. 2000); MPEP 2143.01, Rev. 2, May 2004, page 2100-131. Also note that the mention of a stiffness range of 102-116 MPa by the Examiner is based completely on hindsight and fails to be suggested as being any different than the remaining broad range of 34.5-101 and 117-689.5 MPa of Wu '358.

Distinctions between Present Invention and Wu '294

Wu '294 discloses a golf ball which includes a polyurethane composition which is the reaction product of a prepolymer of a polyol, a polyisocyanate, and a curing agent of at least one diol as noted at the bottom of column 3.

Wu '294 fails to disclose or suggest the combination of hardness and stiffness properties required in connection with a golf ball of the present invention. Wu '294 discloses that a variety of diol curing agents are acceptable for the polyurethane composition, but Wu '294 fails to disclose or suggest any curing agents which include an epoxy group as required for the compositions described by Wu '358. Consequently, Wu '358 cannot be combined with Wu '294, because Wu '358 requires the presence of an

epoxy group-containing curing agent (or else disadvantageous shear resistance properties result as noted in column 9, lines 1-56), whereas Wu '294 employs no epoxy group-containing curing agents and in fact discloses only the use of diol curing agents without any epoxy groups. Thus, significant patentable distinctions exist between the present invention and Wu '294. Further, Wu '294 cannot be combined with Wu '358 because of significant inconsistencies between these references. Therefore, the above-noted rejection based on these references should be withdrawn.

In addition to the above, it is submitted that the fact that the Wu '258 and Wu '294 references can be combined fails to be sufficient to establish *prima facie* obviousness, unless the references themselves suggest the desirability of the combination. *In re Mills*, 16 USPQ2d 1430 (Fed. Cir. 1990); MPEP 2143.01, Rev. 2, May 2004, page 2100-131. In the present situation, the requirement of Wu '358 for an epoxy compound which is not used in Wu '294 undermines the attempt to combine these references together. Therefore, significant patentable distinctions exist between the present invention and both of these references whether taken separately or improperly combined.

Conclusion

It is submitted for the reasons stated above that the present claims define patentable subject matter such that this application should now be placed condition for allowance.

Pursuant to 37 C.F.R. §§ 1.17 and 1.136(a), Applicant(s) respectfully petition(s) for a one (1) month extension of time for filing a reply in connection with the present application, and the required fee of \$120.00 is attached hereto.

If any questions arise regarding the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,
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By 

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